RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _/0/591,482_
Source: _1FWP_
Date Processed by STIC: _9/20/06_

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: _10/591,482_   CRF Edit Date: _9/20/06_
                                     Edited by: _____

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

____ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

✓ Deleted: ✓ invalid beginning/end-of-file text ; ___ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

_____

____ Moved responses to same line as heading/numeric identifier, specifically:

_____

____ Other:

_____
_____
_____

IFWP

RAW SEQUENCE LISTING   DATE: 09/20/2006
PATENT APPLICATION: US/10/591,482   TIME: 17:28:43

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\09202006\J591482.raw

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    3 <110> APPLICANT: Bayerische Julius-Maximilians-Universitat Wurzburg
    5 <120> TITLE OF INVENTION: Mutein of a bone morphogenetic protein and use thereof
    7 <130> FILE REFERENCE: S 10019 PCT
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/591,482
C--> 9 <141> CURRENT FILING DATE: 2006-09-01
    9 <160> NUMBER OF SEQ ID NOS: 33
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   31               20                  25                  30
   34 Val Ala Pro Pro Gly Tyr His Ala Phe Tyr Cys His Gly Glu Cys Pro
   35           35                  40                  45
   38 Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
   39       50                  55                  60
   42 Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val
   43 65                  70                  75                  80
   46 Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu Asn Glu
   47               85                  90                  95
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   51               100                 105                 110
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   65 <222> LOCATION: (1)..(345)
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   72 gtggacttca gtgacgtggg gtggaatgac tggattgtgg ctcccccggg gtatcacgcc   120
   74 ttttactgcc acggagaatg ccctttttcct ctggctgatc atctgaactc cactaatcat   180
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RAW SEQUENCE LISTING   DATE: 09/20/2006
PATENT APPLICATION: US/10/591,482   TIME: 17:28:43

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\09202006\J591482.raw

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76 gccattgttc agacgttggt caactctgtt aactctaaga ttcctaaggc atgctgtgtc    240
78 ccgacagaac tcagtgctat ctcgatgctg taccttgacg agaatgaaaa ggttgtatta    300
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101             20                  25                  30
104 Trp Ile Val Ala Pro Pro Gly Tyr Gln Ala Phe Tyr Cys His Gly Asp
105             35                  40                  45
108 Cys Pro Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile
109     50                  55                  60
112 Val Gln Thr Leu Val Asn Ser Val Asn Ser Ser Ile Pro Lys Ala Cys
113 65                  70                  75                  80
116 Cys Val Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu
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144 caggccttct actgccatgg ggactgcccc tttccactgg ctgaccacct caactcaacc    180
146 aaccatgcca ttgtgcagac cctggtcaat tctgtcaatt ccagtatccc caaagcctgt    240
148 tgtgtgccca ctgaactgag tgccatctcc atgctgtacc tggatgagta tgataaggtg    300
150 gtactgaaaa attatcagga gatggtagta gagggatgtg ggtgccgctg a            351
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171   20   25   30
174 Lys His Glu Leu Tyr Val Ser Phe Arg Asp Leu Gly Trp Gln Asp Trp
175   35   40   45
178 Ile Ile Ala Pro Glu Gly Tyr Ala Ala Phe Tyr Cys Asp Gly Glu Cys
179   50   55   60
182 Ser Phe Pro Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val
183 65   70   75   80
186 Gln Thr Leu Val His Leu Met Phe Pro Asp His Val Pro Lys Pro Cys
187   85   90   95
190 Cys Ala Pro Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asp Asp
191   100   105   110
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195   115   120   125
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199   130
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218 cgggatctgg gatggcagga ctggattata gcaccagaag gatacgctgc attttattgt   180
220 gatggagaat gttcttttcc acttaacgcc catatgaatg ccaccaacca cgctatagtt   240
222 cagactctgg ttcatctgat gtttcctgac cacgtaccaa agccttgttg tgctccaacc   300
224 aaattaaatg ccatctctgt tctgtacttt gatgacagct ccaatgtcat tttgaaaaaa   360
226 tatagaaata tggtagtacg ctcatgtggc tgccactaa   399
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250 Lys His Glu Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp
251         35              40              45
254 Ile Ile Ala Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys
255     50              55              60
258 Ser Phe Pro Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val
259 65              70              75              80
262 Gln Thr Leu Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys
263             85              90                  95
266 Cys Ala Pro Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asp Asp
267         100             105             110
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294 caagacctgg gatggcagga ctggatcatt gcacccaagg gctatgctgc caattactgt     180
296 gatggagaat gctccttccc actcaacgca cacatgaatg caaccaacca cgcgattgtg     240
298 cagaccttgg ttcaccttat gaaccccgag tatgtcccca aaccgtgctg tgcgccaact     300
300 aagctaaatg ccatctcggt tctttacttt gatgacaact ccaatgtcat tctgaaaaaa     360
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327         35              40              45
330 Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala Pro Glu Gly Tyr Ala Ala
331     50              55              60
334 Tyr Tyr Cys Glu Gly Glu Cys Ala Phe Pro Leu Asn Ser Tyr Met Asn
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335 65                    70                   75                        80
338 Ala Thr Asn His Ala Ile Val Gln Thr Leu Val His Phe Ile Asn Pro
339                   85                   90                   95
342 Glu Thr Val Pro Lys Pro Cys Cys Ala Pro Thr Gln Leu Asn Ala Ile
343                   100                  105                  110
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370 cacgagctgt atgtcagctt ccgagacctg ggctggcagg actggatcat cgcgcctgaa     180
372 ggctacgccg cctactactg tgagggggag tgtgccttcc ctctgaactc ctacatgaac     240
374 gccaccaacc acgccatcgt gcagacgctg gtccacttca tcaacccgga aacggtgccc     300
376 aagccctgct gtgcgcccac gcagctcaat gccatctccg tcctctactt cgatgacagc     360
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382 <211> LENGTH: 139
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388 <222> LOCATION: (1)..(139)
389 <223> OTHER INFORMATION: BMP-8
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399                   20                   25                   30
402 His Gly Arg Gln Val Cys Arg Arg His Glu Leu Tyr Val Ser Phe Gln
403             35                   40                   45
406 Asp Leu Gly Trp Leu Asp Trp Val Ile Ala Pro Gln Gly Tyr Ser Ala
407       50                   55                   60
410 Tyr Tyr Cys Glu Gly Glu Cys Ser Phe Pro Leu Asp Ser Cys Met Asn
411 65                   70                   75                        80
414 Ala Thr Asn His Ala Ile Leu Gln Ser Leu Val His Leu Met Lys Pro
415                   85                   90                   95
418 Asn Ala Val Pro Lys Ala Cys Cys Ala Pro Thr Lys Leu Ser Ala Thr
419                   100                  105                  110
422 Ser Val Leu Tyr Tyr Asp Ser Ser Asn Asn Val Ile Leu Arg Lys His
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VERIFICATION SUMMARY　　　　　　　　DATE: 09/20/2006
PATENT APPLICATION:　 **US/10/591,482**　　　TIME: 17:28:44

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\09202006\J591482.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

Raw Sequence Listing before editing (for reference only)

IFWP

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   3 <110> APPLICANT: Bayerische Julius-Maximilians-Universitat Wurzburg
   5 <120> TITLE OF INVENTION: Mutein of a bone morphogenetic protein and use thereof
   7 <130> FILE REFERENCE: S 10019 PCT
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/591,482
C--> 9 <141> CURRENT FILING DATE: 2006-09-01
   9 <160> NUMBER OF SEQ ID NOS: 33
  11 <170> SOFTWARE: PatentIn version 3.1
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ERRORED SEQUENCES

Does Not Comply Corrected Diskette Needed

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1309         50                  55                  60
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1313 65                  70                  75                  80
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E--> 1338 22
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VERIFICATION SUMMARY   DATE: 09/18/2006
PATENT APPLICATION: **US/10/591,482**   TIME: 15:18:01

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\09182006\J591482.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1327 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:33
L:1333 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:33